

Union Pacific Maintenance of Way Engineering Equipment Inspection and Safety Requirements

Revised: 2/17/22

General Requirements

In addition to all existing Engineering equipment inspection and maintenance requirements, including inspection before use, Engineering equipment must be safety inspected annually by an Equipment Manager, Supervisor, or Mechanic. The equipment must be certified safe through both a properly filled out Safety Certification decal (PC-08062) and a closed Safety notification (also referred to as “Requests” in the work equipment portal) for the equipment. This inspection will include the following items:

Note: Each non-complying RMM Defect or Safety Requirement below will require a Safety Work Order (PM05) to be created (see page 4 for screenshots of the drop-down menus). The safety inspection can be closed after the PM05 safety work order is created

1. Compliance with current UPRR ‘RMM’ Rules (‘Safety Policy for Roadway Maintenance Machines and Hyrails’), including logbook compliance
2. Non-complying curtains, windows, guards, Lexan, steps, or handholds
3. Wheels – Visual inspection and gauged for wear using appropriate gauge
4. Any unusual wear or conditions that could adversely affect the safe operation of the equipment
5. Check functionality of all safety circuits such as hydraulic cut-offs, electrical interlocks, seat safety switches, pilot controls, joystick disable, emergency stop buttons, etc.
6. Lock Out Tag Out Box – Must be complete and be usable. Complete replacement box kits can be ordered in eProcurement under UP item # 170-5405
7. Towing System – Must be compliant with current policy and include Towing Eye, Self-Locking Hitch Pin, and Safety Chain Bracket. Details and photos are on Page 7
8. Safety Certification decal (PC-08062) to be filled out and placed within operator's view inside operator station. Remove old decals or place on top of old decal to eliminate multiple decal locations. Do not reuse the previously applied decal

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Special Rules for Personnel Push Cars

1. Stamped wheels should no longer be in service effective 12/31/2011. Any personnel push car should be considered out of service if equipped with stamped wheels
2. All personnel push cars must be inspected daily prior to use and the inspection record placed in the push car log book
 - 2.1. This inspection is to be done by the operator of the machine towing the personnel push car and is to be recorded in the personnel push car log book. The inspection is to include a visual inspection of wheels, bearings, bearing housings, axles, hitches, tow bars, seats, seat belts, windows, and curtains (if equipped). Any unusual wear, wheel cracking or other unusual conditions must be reported immediately. If there is any question about the safety of the personnel push car, it must not be used until the potentially unsafe conditions are resolved
 - 2.2. This inspection will include ensuring that each push car has light weight and load limit displayed on the push car body in line with UPRR stenciling requirements
 - 2.3. If unusual affects occur during the movement of the personnel push car, for example, excessive vertical movement, excessive car hunting, unusual sounds, the car must be stopped until the source of the unusual affect is determined to be safe or corrected
3. All personnel push car wheel systems must be inspected every 30 days by a qualified Work Equipment Supervisor, Mechanic or Machinist. In addition to a visual inspection outlined in Item 1 above, each wheel must be gauged to determine wheel and flange thickness
 - 3.1. For cast or forged wheels, refer to UPRR Service Bulletin PSB 2018-001 (included in this document) to gauge each wheel
 - 3.2. All 30 day inspections (Including when wheels were gauged) must be logged in the push car log book
4. During the 30 day inspection all brakes must be visually inspected and tested to determine they are working properly and equipped with a brake handle
5. All personnel push cart wheels must be equipped with derail bars set for 3" above top of rail
6. All towable personnel push cars must be connected to the towing machine with a cushioned tow bar when people are in the push car and it is moving
7. Seat belts must be worn by all occupants of a moving personnel push car
8. Safety Certification decal (PC-08062) to be filled out and applied to push cart. Remove old decals or place on top of old decal to eliminate multiple decal locations. Do not reuse old decal

Union Pacific Maintenance of Way Engineering Equipment Inspection and Safety Requirements

Revised: 2/17/22

Special Rules for Push Cars (Non-Personnel) and Small Machines with Cast or Forged Wheels


1. Stamped wheels are not allowed to be in service. Any machine or cart with stamped wheels must be removed from service until replaced
2. All newly acquired machines or push cars must be equipped with cast or forged wheels. No new machines or push cars may be acquired with stamped wheels. All new push cars must be purchased via the appropriate store stock or capital acquisition processes
3. All non-personnel push cars and machines with cast or forged wheels must be inspected daily in line with UPRR rules
 - a. For push cars, this inspection is to be done by the operator of the machine towing the push car. For machines the inspection is to be done by the machine operator
 - b. Special attention is to be given to the wheels, bearings, bearing housings, axles, hitches, and tow bars. Any unusual wear, wheel cracking or other unusual conditions must be reported immediately. If there is any question about the safety of the machine or push car, it must not be used until the potentially unsafe conditions are resolved
 - c. This inspection will include ensuring that each push car or machine has light weight and load limit displayed on the push car body in line with UPRR stenciling requirements
 - d. If unusual affects occur during the movement of the push car or machine, for example, excessive vertical movement, excessive car hunting, unusual sounds, the car must be stopped until the source of the unusual affect is determined to be safe or corrected
4. All push cars and small machines with wheels systems must be inspected every year for cast or forged wheels by a qualified Work Equipment Supervisor, Mechanic or Machinist. In addition to a visual inspection outlined in Item 1 above, each wheel must be gauged to determine wheel and flange thickness. In addition to a visual inspection of the wheels, axles, bearings, and general condition, each wheel must be gauged to determine wheel and flange thickness
5. Safety Certification decal (PC-08062) to be filled out and applied to push cart. Remove old decals or place on top of old decal to eliminate multiple decal locations. Do not reuse old decal

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Inspection and Safety Requirements**
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E-Procurement Item Number & Description for the Safety Certification Decal (PC-08062):

| Search Result | | |
|---------------|---------------|--------------------------------------|
| | Item Number 📄 | Description 📄 |
| | PC-08062 | M/W EQUIP SAFETY CERT DECAL 50/PK |

Image of the Safety Certification Decal (PC-08062):

| | |
|---|---|
|  | MOW ENGINEERING EQUIPMENT SAFETY CERTIFICATION |
| Inspection Date: _____ | |
| Inspector Name: _____ | |
| Inspector Title: _____ | |
| PC-08062 | |

To Open a Safety Work Order (PM05), select the following from the drop down menus:

Order Type: ▼

PM01 - Planned Order

PM02 - Unplanned Order

PM05 - Safety/Incident Order

Work Order Details

*Order Description: **FRA 30 Day Safety**

*Planned Start Date: RdWay Equip Incident/Accident

*Main Activity Type: ▼

PM05 - Safety/Incident Order **FRA 30 Day Safety**

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Wheel Gauge Instructions (from UP Service Bulletin PSB-2018-001)

Summary:

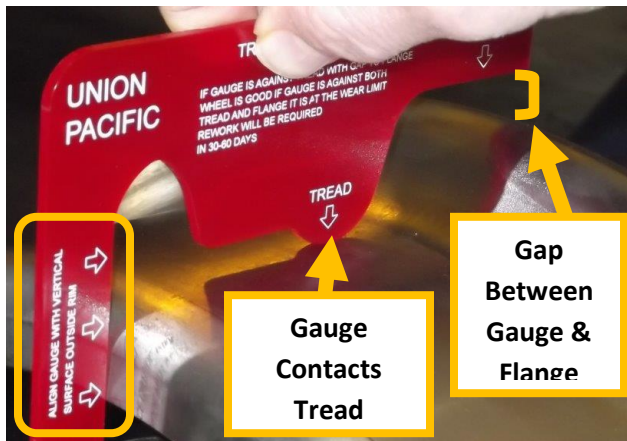
The 4 to 1 Wheel Gauge was developed to consolidate four gauges previously required to measure wheel wear across the work equipment fleet into one gauge. This is the only gauge required now to measure wheels for condemnable tread and flange wear (with the exception of a few unique wheel designs such as the wheels used on John Deere Speed Swings - the inspector should use their discretion on what gauge is appropriate to use in these situations). Use the directions and photo examples provided on the following pages as a guide

Note: The 4 to 1 Wheel Gauge is available only through Denver Shop

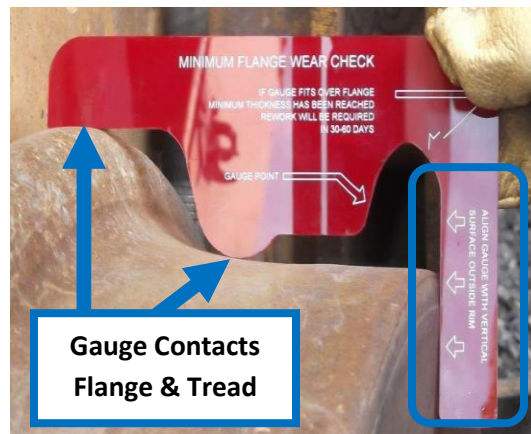
Tread Wear Check Instructions:

1. Align straight edge of gauge so it is flush and vertical with wheel face
2. Attempt to contact both the flange and tread depth indicator of the gauge with the wheel
3. If gauge contacts the wheel tread but there is a gap between the gauge and the wheel flange, the wheel is within the limit for tread wear and no further action is required

If the gauge contacts both the wheel flange and wheel tread, the wheel is outside of wear limits and is condemnable for tread wear. Proceed with creating a PM01 planned work order for wheel replacement



Within Wear Limit



Must Replace

Union Pacific Maintenance of Way Engineering Equipment
Inspection and Safety Requirements
Revised: 2/17/22

Flange Wear Check Instructions:

1. Attempt to place gauge over flange of the wheel as shown below
2. If gauge does not fit over the wheel flange, the flange is within the wear limit and no further action is required

If the gauge fits over the flange and it contacts the wheel at the gauge point, the minimum thickness limit has been reached and the wheel is condemnable for flange wear. Proceed with creating a PM01 planned work order for wheel replacement



Within Wear Limit



Must Replace

Union Pacific Maintenance of Way Engineering Equipment
Inspection and Safety Requirements
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Towing Specification

Equipment must be equipped with the following:

- Towing Eye (UP Item # 598-2105)
- Self-Locking Hitch Pin (UP Item # 598-6210)
- Safety Chain Bracket (UP Item # 598-6205)



Tow Bars to be equipped with safety chains as shown below:



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Push Cart Safety Procedure

- Weight of cart to be towed is not to exceed 50% of weight of towing machine. It is permissible to exceed weight ratio operating in slow working speed
- Any deviations (emergency, etc.) from the weight limits have to be addressed in job briefings and compensated with lower speed limits and/or greater distances between machines
- Special care has to be taken under adverse conditions (wet / greasy rail, etc.)
- Do not load carts beyond rated capacity. Follow weight limits listed below
- Push carts compliant with the current Towing Specifications. Both the empty weight and the total capacity must be stenciled on each cart

Empty Weight:

Two Axle Design 1,580 lb.

- Current stock push cart with UP Item # 570-0288
- Small axle old Fairmont style cart was 1100 lb.

Three Axle Design Various – Weigh Cart if Unknown

- Misc. carts have been manufactured over the years and consideration should be made to weigh the cart empty and loaded, but the stencil of Empty Weight and Total Capacity (GVW) is mandatory

Total Capacity:

Two Axle Design 20,000 lb. (GVW)

- Small axle old Fairmont style cart was 7,500 lbs. GVW

Three Axle Design 25,000 lb. (GVW)